AMENDMENTS TO THE SPECIFICATION:

Please add the following paragraph before the "BACKGROUND OF THE INVENTION SECTION" on page 1:

RELATED APPLICATIONS

This application is a continuation of U.S. patent application serial No. 10/406,455, filed April 04, 2003 and entitled "SCANNING ELECTRON MICROSCOPE AND SAMPLE OBSERVATION USING THE SAME," now issued as U.S. Patent No. _____ (attorney docket No. 058799-0089), which is a continuation of U.S. patent application serial No. 09/656,836, filed September 7, 2000, now U.S. Patent No. 6,555,816, entitled " SCANNING ELECTRON MICROSCOPE AND SAMPLE OBSERVATION USING THE SAME," both are commonly assigned to the assignee herein.

At page 11, fourth paragraph after the heading BRIEF DESCRIPTION OF THE DRAWINGS:

Fig. 4 is a diagram of assistance in explaining the X-ray spectrum detected by an X-ray detector when ~~a~~ reflected ~~electron~~ electrons ~~falls~~ fall on the X-ray ~~detection plane of the X-ray~~ detector.

Please replace the paragraph starting from page 11, line 15 through line 18 with the following paragraph:

Fig. 4 is a diagram of assistance in explaining the X-ray spectrum detected by an X-ray detector when [[a]] reflected ~~electron falls~~ electrons fall on the plane of the X-ray [detection plane of the X-ray] detector.

Please replace the paragraph starting from page 15, line 19 through page 16, line 14 with the following paragraph:

Each of the power ~~supplys~~ supplies 11 to 18 mentioned above is controlled by a CPU 19. The CPU 19 also controls the signal processing means 20. In addition, the CPU 19 is connected with a memory (storage area) 29 to be used exclusively for high-magnification-mode and a memory (storage area) 30 to be used exclusively for low-magnification mode. The memory 29 exclusively for high-magnification mode stores the values of the signal amplifier 41 and the signal processing means 20 that are set with respect to the brightness and the contrast of a sample image when its observation is performed in high-magnification mode. The memory 30 exclusively for low-magnification mode stores the values of the signal amplifier 41 and the signal processing means 20 that are set with respect to the brightness and the contrast of a sample image when its observation is performed in the first low-magnification mode, as well as the values of the signal amplifier 41 and the signal processing means 20 that are set with respect to the brightness and the contrast of a sample image when its observation is performed in the second low-magnification mode.

Please replace the paragraphs starting from page 25, line 16 through page 27, line 2 with the following paragraphs:

In the second low-magnification mode, the microscope is used under the condition of constant excitation (I: exciting current, N: number of coil turns, V: accelerating voltage). Therefore the trajectory of the primary electron beam is not changed in the magnetic field of the object lens, and so the rotation of the image does not occur. Also in high-magnification mode, the rotation of the image will not occur if the microscope is used under the condition of constant

excitation . However, if the microscope is used under a condition that the excitation is not held constant, the rotation of the image will occur when the current value of the object lens or the like is changed. In the first low-magnification mode, the microscope is used under the condition that the exciting current of the object lens is held constant, and therefore ~~the~~ a rotation of the image will occur when the accelerating voltage of the primary electron beam is changed. Thus, in observation modes where the excitation is not held constant, the scanning direction of the primary electron beam is controlled in such a way that the image rotation caused by the object lens can be cancelled, by adjusting the ratio of the deflecting current flowing through the X deflecting coils of the deflecting coils 9a and 9b to the deflecting current flowing through the Y deflecting coils of the deflecting coils 9a and 9b. As a result, the scanning direction of the primary electron beam on the sample is made to coincide with the X direction of the sample stage at all times.

According to the embodiments of the present invention, efficient low-magnification observation is made possible by setting a plurality of low-magnification modes each ~~sutable~~ suitable for sample image (secondary electron image) observation and for X-ray analysis. The present invention makes it possible to use low-magnification mode during X-ray analysis, in particular, which has previously been difficult, and to obtain an X-ray mapping image with a wide view.